



# Environmental Fact Sheet

## FINAL RULE FOR THIRD THIRD SCHEDULED WASTES COMPLETES STATUTORY REQUIREMENTS FOR LAND DISPOSAL RESTRICTIONS

*The fifth in a series of five Land Disposal Restrictions (LDR) rulemakings establishes treatment standards and effective dates for "Third Third" wastes, including characteristic wastes, and soft hammer wastes from the First and Second Third lists. The treatment standards apply to hazardous wastes that are land disposed, including those that are injected into deep wells. The Environmental Protection Agency (EPA) is granting, at a minimum, a three-month national capacity variance for all wastes affected by this rule to provide industry with time needed to comply with the new regulations.*

### BACKGROUND

The 1984 amendments to the Resource Conservation and Recovery Act (RCRA) required EPA to establish treatment standards for all hazardous wastes destined for land disposal. These standards must specify a level or method of treatment which substantially reduces the toxicity or mobility of the hazardous constituents so as to minimize long-term threats to human health and the environment.

Congress specified strict dates when particular groups of hazardous wastes not meeting the treatment standards are prohibited from land disposal unless the Agency finds that there will be "no migration of hazardous constituents...for as long as the wastes remain hazardous." With this rulemaking, the Agency has met all of the statutory deadlines imposed by Congress:

- On November 7, 1986, spent solvent and dioxin-bearing wastes were regulated.
- On July 8, 1987, the "California List"\* wastes were addressed.
- Except for those wastes in today's rulemaking, all other wastes listed as of November 8, 1984 were included in the land disposal restrictions on August 8, 1988 (First Third) and June 8, 1989 (Second Third).

\*"California List" wastes are liquid and nonliquid hazardous wastes containing halogenated organic compounds (HOCs) above 1,000 ppm, and liquid hazardous wastes containing polychlorinated biphenyls (PCBs) above 50 ppm, certain toxic metals above specified statutory concentrations, or corrosive liquid wastes that have a pH level below two.

The land ban provisions will change the way that industry must manage their hazardous waste and has given considerable impetus to the development of more economic and effective means of treating waste. As a result, treatment technologies have improved rapidly and include methods to destroy, detoxify, or incinerate waste. In addition, hazardous waste generators have developed new ways to recover and reuse waste as well as methods to reduce the volume of hazardous waste requiring treatment.

## **ACTION**

The final rule specifies treatment standards and effective dates for all Third Third waste, characteristic wastes, First and Second Third soft hammer wastes, and five newly listed wastes. EPA also is promulgating treatment standards for multi-source leachate and mixed hazardous/radioactive waste, and is promulgating alternate treatment standards for lab packs. The Agency has rescheduled wastes from the petroleum refining industry to the Third Third and is revising existing standards for these wastes. Previously promulgated treatment standards expressed as "no land disposal" for nonwastewaters are being replaced with treatment levels or specified methods.

The effective date of the rule is May 8, 1990. However, EPA is granting, at a minimum, a three-month national capacity variance to the treatment standards for all wastes affected by this rule to allow the regulated community sufficient time to make necessary changes to comply with the regulations. During the period of variance, wastes that are placed in a landfill or into surface impoundments and do not meet the treatment standards, must be disposed of in units that meet the minimum technological requirements of Section 3004(o) of RCRA (e.g., ground-water monitoring and leachate collection) and comply with the recordkeeping requirements of 40 CFR 268.7.

For the characteristic wastes, EPA is specifying treatment levels below the characteristic for the EP toxic pesticide nonwastewaters and reactive cyanides. In addition, the Agency is specifying methods that require treatment below the characteristic level for high TOC ignitables and for EP toxic pesticide wastewaters. Concentrations are specified at the characteristic level for the EP toxic metals except for selenium, which is slightly higher than the EP level. For corrosive and remaining ignitable and reactive, the standards require that wastes be treated so that they no longer exhibit a characteristic.

The dilution prohibition developed for listed wastes is extended to characteristic wastes included in the Third Third. However, the final rule does not prohibit dilution of characteristic wastes that are generated and managed in wastewater treatment systems regulated under the Clean Water Act or underground injection wells regulated under the Safe Drinking Water Act. Prohibited wastes that are treated by

inappropriate methods or sent to treatment systems that do not treat the wastes are considered impermissibly diluted.

With regard to characteristic wastes, dilution is permissible when wastes are aggregated for legitimate treatment in centralized treatment systems.

Treatment standards for characteristic wastes require the following:

- Wastes that carry more than one characteristic waste code must be treated to meet the standard for each characteristic. Listed wastes that exhibit hazardous characteristics must meet the treatment standard for each waste code, unless each characteristic is specifically addressed in the treatment standard for the listed waste. In addition, land disposal of a waste that exhibits a characteristic is prohibited. The only exception to this standard is selenium where the data only supports a treatment level above the characteristic.
- During the period of a national capacity variance, hazardous wastes that are subject to more than one treatment standard must still meet the treatment standard for any waste that has not received an extension.
- The use of the Toxicity Characteristic Leaching Procedures (TCLP) in assessing whether a waste is subject to the Third Third land ban rule.

The Agency is promulgating alternate treatment standards for lab packs that contain certain prohibited organometallic and organic wastes. These standards are expressed as a specified technology for each of the waste categories. For the organometallic wastes, incineration, followed by treatment to meet the treatment standards for metals (included in the alternate standard) is required. For organic wastes incineration is a specified method. Generators and owners/operators who use the alternate treatment standards for lab pack wastes are required to list each waste code on the notification.

Due to inadequate treatment capacity for mixed hazardous/radioactive wastes included in the Third Third, EPA is granting a two-year national capacity variance for these wastes. Those hazardous wastes listed in the attached tables also are receiving a two-year national capacity variance. Furthermore, the Agency is granting wastes from the petroleum refining industry—EPA hazardous waste numbers K048-K052—a six-month national capacity variance.

EPA amended 40 CFR 268.7 to allow referencing treatment standards for all wastes except spent solvents, California List wastes, and multi-source leachate. The following information must be included in the reference: EPA hazardous waste number, subcategory of the waste code, treatability group, and CFR section where the treatment standards appear. In addition, EPA is allowing a one-time notification and certification for small quantity generator shipments that are subject to tolling agreements.

EPA promulgated waste analysis plan requirements for wastes treated in 90-day tanks or containers. Persons treating prohibited wastes to comply with treatment standards in such tanks and containers are required to prepare a plan justifying the frequency of testing and adhere to recordkeeping requirements.

## **CONCLUSION**

The land disposal restrictions imposed by this rule completes the Agency's assessment of all hazardous waste as required by the Hazardous and Solid Waste Amendments (HSWA). Treatment standards have been established for all listed and characteristic wastes that existed when HSWA was enacted in 1984. Restricting the land disposal of wastes covered by this final rule will create significant changes in hazardous waste management, thereby minimizing threats to human health and the environment.

## **CONTACT**

To order a copy of the *Federal Register* notice, or for additional information, contact the RCRA Hotline Monday-Friday, 8:30 a.m. to 7:30 p.m., EST. The national toll-free number is (800) 424-9346; for the hearing impaired, the number is TDD (800) 553-7672. In Washington, D.C., the number is (202) 382-3000 or TDD (202) 475-9652.

## SUMMARY OF NATIONAL CAPACITY VARIANCES

### Surface-Disposed Wastes<sup>1</sup>

<u>Required Alternative Treatment Technology</u>	<u>Waste Code</u>	<u>Physical Form</u>	<u>Effective Date</u>
Acid Leaching & Chemical Precipitation	D009	Low Mercury Nonwastewater	May 1992
	K106	Low Mercury Nonwastewater	May 1992
	P065	Low Mercury Nonwastewater	May 1992
	P092	Low Mercury Nonwastewater	May 1992
	U151	Low Mercury Nonwastewater	May 1992
Combustion of Sludge/ Solids	F039 <sup>2</sup>	Nonwastewater	May 1992
	K048 <sup>3</sup>	Nonwastewater	November 1990
	K049 <sup>3</sup>	Nonwastewater	November 1990
	K050 <sup>3</sup>	Nonwastewater	November 1990
	K051 <sup>3</sup>	Nonwastewater	November 1990
	K052 <sup>3</sup>	Nonwastewater	November 1990
Mercury Retorting	D009	High Mercury Nonwastewater	May 1992
	K106	High Mercury Nonwastewater	May 1992
	P065	High Mercury Nonwastewater	May 1992
	P092	High Mercury Nonwastewater	May 1992
	U151	High Mercury Nonwastewater	May 1992
Secondary Smelting Storage Area	D008	Lead Materials before Secondary Smelting	May 1992
Thermal Recovery	P087	Nonwastewater/Wastewater	May 1992
Vitrification	D004	Nonwastewater	May 1992
	K031	Nonwastewater	May 1992
	K084	Nonwastewater	May 1992
	K101	Nonwastewater	May 1992
	K102	Nonwastewater	May 1992
	P010	Nonwastewater	May 1992
	P011	Nonwastewater	May 1992
	P012	Nonwastewater	May 1992
	P036	Nonwastewater	May 1992
	P038	Nonwastewater	May 1992
	U136	Nonwastewater	May 1992

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<sup>1</sup>EPA is granting these wastes a two-year national capacity variance, except as otherwise noted. This table does not include mixed radioactive wastes or soil and debris, which are receiving a national capacity variance for all applicable treatment technologies.

<sup>2</sup>Multi-source Leachate.

<sup>3</sup>For K048-K052 petroleum-refining nonwastewaters, EPA is granting only a six-month variance.

## SUMMARY OF NATIONAL CAPACITY VARIANCES

### Deep Well Disposed

<u>Required Alternative Treatment Technology</u>	<u>Waste Code</u>	<u>Physical Form</u>	<u>Effective Date</u>
Acid Leaching followed by Chemical Precipitation	D009	Low Mercury Nonwastewater	May 1992
Alkaline Chlorination	D003 <sup>1</sup>	Wastewater/Nonwastewater	May 1992
Chemical Oxidation followed by Chemical Precipitation	D003 <sup>2</sup>	Wastewater/Nonwastewater	May 1992
Chemical Oxidation followed by Chromium Reduction and Chemical Precipitation	D003 <sup>3</sup>	Wastewater/Nonwastewater	May 1992
Chromium Reduction followed by Chemical Precipitation	D007	Wastewater/Nonwastewater	May 1992
Mercury Retorting	D009	High Mercury Nonwastewaters	May 1992
Neutralization	D002 <sup>4</sup>	Wastewater/Nonwastewater	May 1992
Wet-Air Oxidation	K011	Wastewater	May 1992
	K013	Wastewater	May 1992
	K014	Wastewater/Nonwastewater	May 1992
Wet-Air Oxidation followed by Carbon Adsorption followed by Chemical Precipitation; Biological Treatment followed by Chemical Precipitation	F039 <sup>5</sup>	Wastewater	May 1992

Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

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<sup>1</sup> D003 (Cyanides)

<sup>2</sup> D003 (Sulfides)

<sup>3</sup> D003 (Explosives, Water Reactives, and Other Reactives)

<sup>4</sup> Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

<sup>5</sup> Multi-source Leachate